

Applicants hereby amend independent claims 1 and 22. Specifically, claims 1 and 22 are amended to recite a sole that comprises an outsole layer defining at least one third opening extending therethrough that at least partly overlaps the plurality of second openings. No new matter has been entered thereby. Support for the amendments can be found at least in Applicants' specification at page 11, lines 4-10 of paragraph 0034, and in Applicants' FIGS. 1A and 3. Claims 2-21 and 23-27 depend, either directly or indirectly, from amended independent claims 1 and 22, respectively. Therefore, claims 2-21 and 23-27 incorporate all the limitations of amended independent claims 1 and 22, respectively.

Claims 1-27 are currently pending and presented for reconsideration. In view of the above amendments and following remarks, reconsideration and withdrawal of all grounds of rejection are respectfully requested.

1. Claims 1-12, 17-18, 20, and 22 are rejected under 35 U.S.C. § 103(a) as being unpatentable over Polycarpe in view of Brahm. Applicants respectfully traverse this rejection as applied to the claims, as amended.

Briefly, Polycarpe appears to describe a battery powered climate-controlled shoe that purportedly controls the climate surrounding a user's foot in the shoe during a range of weather conditions. A fan 7, a heater 8, and a constant air intake via an air intake channel 5 that runs from the fan 7 to an air entrance 3 at the top of the shoe, are provided to control the climate. See, generally, column 1, lines 4-7 and lines 56-63, of Polycarpe. The sole of the shoe includes a bottom pad 19, a rigid pad 20, and a flexible pad 15. See, generally, column 3, lines 31-33, and FIG. 4.

Brahm describes an air circulating insole for a shoe. Specifically, Brahm appears to describe an insole 10 that purportedly takes in fresh air at the heel end and discharges it uniformly at spaced points in the toe end portion. See, generally, column 1, lines 27-31, of Brahm. As vertical pressure is applied to the heel area of the insole 10, air is forced to enter a transverse manifold 20 and is distributed among a plurality of longitudinal passageways 22. The air is pumped forwardly through the passageways 22 and out into the shoe through a plurality of openings 24. The plurality of openings 24, located in the toe portion of the sole, are interconnected by the passageways 22. See, generally, column 4, lines 44-59, and FIG. 2.

To establish a prima facie case of obviousness, three basic criteria must be met. First, there must be some suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to modify the reference or to combine reference teachings. Second, there must be a reasonable expectation of success. Finally, the prior art reference (or references when combined) must teach or suggest all the claim limitations. The teaching or suggestion to make the claimed combination and the reasonable expectation of success must both be found in the prior art and not based on applicant's disclosure. In re Vaeck, 947 F.2d 488, 20 USPQ2d 1438 (Fed. Cir. 1991). MPEP § 706.02(j).

Applicants respectfully submit that a prima facie case of obviousness has not been established with respect to independent claims 1 and 22, as amended, for at least two reasons. First, neither Polycarpe nor Brahm, alone or in proper combination, teaches or suggests all the limitations of independent claims 1 and 22, as amended. In addition, Applicants respectfully submit that neither Polycarpe nor Brahm, alone or in proper combination, teaches or suggests the further limitations of at least claims 4-5, 7, and 12, which indirectly depend from amended

independent claim 1. Second, no motivation to combine is present in the cited references and the Office action fails to state, with specificity, any motivation to combine the cited references in the manner contemplated.

Applicants' amended independent claim 1 recites a sole comprising "***an outsole layer defining at least one third opening extending therethrough that at least partly overlaps the plurality of second openings***" in the adjacent support layer. In distinct contrast, neither Polycarpe nor Brahm, alone or in proper combination, teaches or suggests such a structure. With respect to Polycarpe, the reference depicts a bottom pad 19 (*i.e.*, an outsole 19) whose upper surface contains an opening 21 in fluid communication with grooves 22. Both the opening 21 and the grooves 22 are indentations in the upper surface of the outsole 19. Neither the opening 21, nor the grooves 22, form an opening extending through the outsole 19. See, for example, FIGS. 4 and 5 of Polycarpe. In distinct contrast, Applicants' amended independent claim 1 recites a sole comprising "***an outsole layer defining at least one third opening extending therethrough that at least partly overlaps the plurality of second openings.***"

With respect to Brahm, Applicants respectfully submit that the disclosure of Brahm fails to cure the deficiencies of Polycarpe with respect to amended independent claim 1. Specifically, Brahm is silent with respect to, and therefore fails to disclose, a sole comprising "***an outsole layer defining at least one third opening extending therethrough that at least partly overlaps the plurality of second openings.***" There is nothing in Brahm, in its entirety, to suggest or motivate one skilled in the art to arrive at Applicants' claimed invention as recited in amended independent claim 1.

Applicants, therefore, submit that neither Polycarpe nor Brahm, alone or in proper combination, provides the teaching, suggestion, or motivation for one skilled in the art to arrive at the sole as claimed in amended independent claim 1.

As with amended independent claim 1, Applicants' amended independent claim 22 specifically recites a sole comprising ***"an outsole layer defining at least one third opening extending therethrough that at least partly overlaps the plurality of second openings."*** Accordingly, for at least the same reasons as explained hereinabove with respect to amended independent claim 1, Applicants respectfully submit that amended independent claim 22 is also patentable over Polycarpe in view of Brahm.

In addition to the foregoing, Applicants respectfully submit that neither Polycarpe nor Brahm, alone or in proper combination, teaches or suggests the further limitations of at least dependent claims 4-5, 7, and 12, which indirectly depend from amended independent claim 1.

Applicants' dependent claim 4 recites an insole layer defining a plurality of first openings, wherein ***"a first portion of the plurality of first openings are disposed in at least one of a ball region and a heel region of the sole, a second portion of the plurality of first openings are disposed in other regions of the sole, and the openings of the first portion are smaller than the openings of the second portion."*** In distinct contrast, neither Polycarpe nor Brahm, alone or in proper combination, teaches or suggests such a structure. With respect to Polycarpe, the reference depicts a flexible pad 15 (*i.e.*, an insole 15), which contains holes 9, 16. See, for example, FIGS. 2 and 4 of Polycarpe. Assuming, but without deciding, that, as stated at lines 4-6 of paragraph 2 on page 2 of the Office action, the holes 9 located along the periphery of the insole 15 are of smaller size than the holes 16 located in the interior of the insole 15, Polycarpe's

structure still does not meet the limitation recited in Applicants' dependent claim 4. Applicants' first portion of the plurality of first openings, which are smaller than Applicants' second portion of the plurality of first openings, are disposed in at least one of a ball region and a heel region of the insole; they are not merely located along the periphery of the insole, as are the assumed smaller holes 9 of Polycarpe.

With respect to Brahm, Applicants respectfully submit that the disclosure of Brahm fails to cure the deficiencies of Polycarpe with respect to dependent claim 4. Specifically, Brahm is silent with respect to, and therefore fails to disclose, an insole layer defining a plurality of first openings, wherein ***"a first portion of the plurality of first openings are disposed in at least one of a ball region and a heel region of the sole, a second portion of the plurality of first openings are disposed in other regions of the sole, and the openings of the first portion are smaller than the openings of the second portion."*** There is nothing in Brahm, in its entirety, to suggest or motivate one skilled in the art to arrive at the limitation recited in Applicants' dependent claim 4.

Applicants' dependent claim 5 defines diameters for the openings of the first portion and for the openings of the second portion that are recited in Applicants' dependent claim 4. Specifically, Applicants' dependent claim 5 recites that ***"the openings of the first portion are less than about 3 mm in diameter and the openings of the second portion are greater than about 4 mm in diameter."*** Applicants respectfully submit that both Polycarpe and Brahm are silent with respect to, and therefore fail to disclose, specific sizes for any of their openings or their related sizes. Nor is there anything in Polycarpe or in Brahm, in their entirety, to suggest or motivate one skilled in the art to arrive at the specific and relative diameters claimed in Applicants' dependent claim 5.

Applicants' dependent claim 7 recites a channel "***disposed on a bottom side of the insole layer***" for interconnecting a portion of the plurality of first openings. In distinct contrast, neither Polycarpe nor Brahm, alone or in proper combination, teaches or suggests such a structure. With respect to Polycarpe, as stated at lines 13-14 of paragraph 2 on page 2 of the Office action, the reference does not disclose the holes 9, 16 being interconnected or having a channel which connects them. With respect to Brahm, the longitudinal passageways 22 are disposed between the top side and the bottom side of the transverse manifold 20 of the insole 10. The longitudinal passageways are not disposed on a bottom side of the transverse manifold 20 of the insole 10. See, for example, FIG. 3 of Brahm. In distinct contrast, Applicants' dependent claim 7 recites a channel "***disposed on a bottom side of the insole layer***." Applicants, therefore, respectfully submit that the disclosure of Brahm fails to cure the deficiencies of Polycarpe with respect to Applicants' dependent claim 7.

Applicants' dependent claim 12 recites a sole, wherein "***the plurality of second openings form a grill pattern***." In distinct contrast, neither Polycarpe nor Brahm, alone or in proper combination, teaches or suggests such a structure. With respect to Polycarpe, the holes 9, 16 are generally circular in shape. The holes 9, 16 do not extend in a lengthwise fashion, separated by generally parallel bands or ribs, to form a grill pattern. See, for example, FIG. 4 of Polycarpe. In distinct contrast, Applicants' second openings are not circular; rather, they extend in a lengthwise fashion, separated by generally parallel bands or ribs, such that "***the plurality of second openings form a grill pattern***." See Applicants' FIGS. 1A-1B and page 9, paragraph 0028, of Applicants' specification.

With respect to Brahm, Applicants respectfully submit that the disclosure of Brahm fails to cure the deficiencies of Polycarpe with respect to dependent claim 12. Specifically, Brahm is silent with respect to, and therefore fails to disclose, a sole, wherein ***“the plurality of second openings form a grill pattern.”*** Neither is there anything in Brahm, in its entirety, to suggest or motivate one skilled in the art to arrive at the limitation recited in Applicants’ dependent claim 12.

Applicants, therefore, submit that neither Polycarpe nor Brahm, alone or in proper combination, provides the teaching, suggestion, or motivation for one skilled in the art to arrive at the further limitations of at least dependent claims 4-5, 7, and 12. In addition to the reasons provided herein with respect to amended independent claim 1, from which claims 4-5, 7, and 12 indirectly depend, Applicants respectfully submit that, for at least these reasons, at least dependent claims 4-5, 7, and 12 are also independently patentable over Polycarpe in view of Brahm.

Further, it is well settled that, to combine references, there must be some suggestion or motivation to do so in the references themselves or in the knowledge generally available to one of ordinary skill in the art that lies outside the disclosure of the patent application. See, for example, MPEP § 2142. Absent this motivation, a rejection under 35 U.S.C. § 103(a) should not be maintained. As stated in MPEP § 2143.01, “[t]he mere fact that references can be combined or modified does not render the resultant combination obvious unless the prior art suggests the desirability of the combination.” In re Mills, 916 F.2d 680, 16 USPQ 1430 (Fed. Cir. 1990). As that section further states, “although a prior art device ‘may be capable of being modified to run

the way the apparatus is claimed, there must be a suggestion or motivation in the reference to do so.” In re Mills, 916 F.2d at 682.

As mentioned hereinabove, Polycarpe reveals an outsole 19 whose upper surface contains an opening 21 in fluid communication with grooves 22. The grooves 22 extend along the length of the upper surface of the outsole 19 (*i.e.*, from the toe portion all the way to the heel portion). See, for example, FIG. 4 of Polycarpe. Therefore, the grooves 22 provide a means for channeling air throughout the entire sole (*i.e.*, from the toe portion of the outsole 19, where the fan 7 is located, to the heel portion of the outsole 19). Brahm, as described hereinabove, discloses a plurality of longitudinal passageways 22 that channel air to the toe end portion of an insole. Applicants, therefore, respectfully submit that no motivation to combine is present in the cited references. Polycarpe already reveals a means of channeling air throughout a sole. A person of ordinary skill in the art would not, therefore, be motivated to combine the teachings of Brahm with the teachings of Polycarpe, as Brahm does not add anything new to the teachings of Polycarpe that is relevant to Applicant’s invention, as claimed.

Moreover, as stated in MPEP § 2142, “[t]he examiner bears the initial burden of factually supporting any prima facie conclusion of obviousness. If the examiner does not produce a prima facie case, the applicant is under no obligation to submit evidence of nonobviousness.” As further stated in that section, “[w]hen the motivation to combine the teachings of the references is not immediately apparent, it is the duty of the examiner to explain why the combination of the teachings is proper.” Ex parte Skinner, 2 USPQ2d 1788 (Bd. Pat. App. & Inter. 1986). In particular, “the Board must identify *specifically* the principle, known to one of ordinary skill, that suggests the claimed combination.” In Re Sang Su Lee, 277 F.3d 1338, 1343 (Fed. Cir. 2002)



(quoting In Re Rouffet, 149 F.3d 1350, 1359, 47 USPQ2d 1453, 1459 (Fed. Cir. 1998))  
(emphasis added). “The examiner can satisfy the burden of showing obviousness of the combination ‘only by showing some objective teaching in the prior art or that knowledge generally available to one of ordinary skill in the art would lead that individual to combine the relevant teachings of the references.’” In Re Sang Su Lee, 277 F.3d 1338, 1343 (Fed. Cir. 2002)  
(quoting In Re Fritch, 972 F.2d 1260, 1265, 23 USPQ2d 1780, 1783 (Fed. Cir. 1992)).

Applicants respectfully submit that the combination proposed in the Office action is legally deficient, because the Office action does not provide with specificity any facts or arguments to show that the nature of the problem or the knowledge of one of ordinary skill in the art would suggest the combination of Polycarpe with Brahm in the manner described in the Office action.

For at least these reasons, Applicants respectfully submit that independent claims 1 and 22, as amended, are allowable over Polycarpe in view of Brahm. Because claims 2-12, 17-18, and 20 depend, either directly or indirectly, from amended independent claim 1, Applicants respectfully submit that these claims are allowable as well.

Accordingly, Applicants respectfully request reconsideration and withdrawal of the rejection of claims 1-12, 17-18, 20, and 22 under 35 U.S.C. § 103(a) as being unpatentable over Polycarpe in view of Brahm.

2. Claims 13-14 are rejected under 35 U.S.C. § 103(a) as being unpatentable over Polycarpe in view of Brahm and Cintron. Applicants respectfully traverse this rejection as applied to the claims, as amended.

Briefly, Cintron appears to describe a self-contained air circulating footbed 10 that has a multi-layered construction. Specifically, the footbed 10 has three main layers: a top layer 20, or sockliner; a second layer 30 that may include an anti-microbial foam material; and a third layer 40 that may be made from ethyl vinyl acetate (EVA). See, generally, column 1, lines 38-57, of Cintron.

Applicants respectfully submit that the disclosure of Cintron fails to cure the deficiencies of Polycarpe and Brahm with respect to amended independent claim 1, as described hereinabove in section 1. Specifically, Cintron first fails to teach, suggest, or motivate one skilled in the art to contemplate a sole comprising *“an outsole layer defining at least one third opening extending therethrough that at least partly overlaps the plurality of second openings.”*

Applicants, therefore, submit that neither Polycarpe nor Brahm nor Cintron, alone or in proper combination, provides the teaching, suggestion, or motivation for one skilled in the art to arrive at the sole as claimed in amended independent claim 1.

Further, Applicants respectfully submit that the combination proposed in the Office action is legally deficient, because the Office action does not provide with specificity any facts or arguments to show that the nature of the problem or the knowledge of one of ordinary skill in the art would suggest the combination of Polycarpe with Brahm and Cintron.

For at least these reasons, Applicants respectfully submit that dependent claims 13-14, which depend either directly or indirectly from amended independent claim 1, are allowable over Polycarpe in view of Brahm and Cintron. Applicants respectfully request reconsideration and withdrawal of the rejection of claims 13-14 under 35 U.S.C. § 103(a) based on these references.

3. Claims 15-16 and 19 are rejected under 35 U.S.C. § 103(a) as being unpatentable over Polycarpe in view of Brahm and Foley. Applicants respectfully traverse this rejection as applied to the claims, as amended.

Briefly, Foley appears to describe an athletic shoe 10 having a midsole that is devoid of cushioning material in the arch region. A stiff arch member 24 replaces the midsole in the arch region of the sole 14, purportedly to support the foot of the wearer, while reducing the overall weight of the athletic shoe 10. See, generally, column 5, lines 40-55, of Foley.

Applicants respectfully submit that the disclosure of Foley fails to cure the deficiencies of Polycarpe and Brahm with respect to amended independent claim 1, as described hereinabove in section 1. Specifically, Foley fails to teach, suggest, or motivate one skilled in the art to contemplate a sole comprising ***“an outsole layer defining at least one third opening extending therethrough that at least partly overlaps the plurality of second openings.”***

Applicants, therefore, submit that neither Polycarpe nor Brahm nor Foley, alone or in proper combination, provides the teaching, suggestion, or motivation for one skilled in the art to arrive at the sole as claimed in amended independent claim 1.

Further, Applicants respectfully submit that the combination proposed in the Office action is without basis, because the Office action does not provide with specificity any facts or arguments to show that the nature of the problem or the knowledge of one of ordinary skill in the art would suggest the combination of Polycarpe with Brahm and Foley.

For at least these reasons, Applicants respectfully submit that dependent claims 15-16 and 19, which depend either directly or indirectly from amended independent claim 1, are allowable over Polycarpe in view of Brahm and Foley. Applicants respectfully request reconsideration and

withdrawal of the rejection of claims 15-16 and 19 under 35 U.S.C. § 103(a) based on these references.

4. Claim 21 is rejected under 35 U.S.C. § 103(a) as being unpatentable over Polycarpe in view of Brahm and Moretti. Applicants respectfully traverse this rejection as applied to the claim, as amended.

Briefly, Moretti purports to describe a vapor permeable shoe. Specifically, the shoe 10 comprises a vapor-permeable upper 11 that is associated with a sole 12. The sole 12 has a tread 13 made of an elastomer that is shaped so as to form a plurality of domes 14 having a convexity directed toward the ground. Each one of the domes 14 has a minute through slit 15 which is normally closed by virtue of the elasticity of the material, *i.e.*, a one-way valve that opens in an over-pressure condition. The shoe 10 also comprises a vapor-permeable or perforated insole 17 and a waterproof and vapor-permeable membrane 18. See, generally, column 2, line 63, to column 3, line 14, of Moretti.

Applicants respectfully submit that the disclosure of Moretti fails to cure the deficiencies of Polycarpe and Brahm with respect to amended independent claim 1, as described hereinabove in section 1. Specifically, Moretti fails to teach, suggest, or motivate one skilled in the art to contemplate a sole comprising ***“an outsole layer defining at least one third opening extending therethrough that at least partly overlaps the plurality of second openings.”***

Applicants, therefore, submit that neither Polycarpe nor Brahm nor Moretti, alone or in proper combination, provides the teaching, suggestion, or motivation for one skilled in the art to arrive at the sole as claimed in amended independent claim 1.

Further, Applicants respectfully submit that the combination proposed in the Office action is without basis, because the Office action does not provide with specificity any facts or arguments to show that the nature of the problem or the knowledge of one of ordinary skill in the art would suggest the combination of Polycarpe with Brahm and Moretti.

For at least these reasons, Applicants respectfully submit that dependent claim 21, which depends directly from amended independent claim 1, is allowable over Polycarpe in view of Brahm and Moretti. Applicants respectfully request reconsideration and withdrawal of the rejection of claim 21 under 35 U.S.C. § 103(a) based on these references.

5. Claims 23-27 are rejected under 35 U.S.C. § 103(a) as being unpatentable over Polycarpe in view of Brahm and Burt. Applicants respectfully traverse this rejection as applied to the claims, as amended.

Briefly, Burt appears to describe a ventilated shoe 10 that includes an upper portion 12 having an external layer 20, a reinforcing layer 30, and an internal layer 40. Both the external layer 20 and the internal layer 40 are made from a ventilated mesh material. Preferably, the external layer 20 is made of mesh with abrasion resistance characteristics and the internal layer 40 is made of a three-dimensional mesh that is purportedly more comfortable to the wearer than mesh. The three-dimensional mesh is a loose configuration of fibers 42 between a soft porous inner layer 41 and an outer porous layer 43, which provides a porous layer that allows gases, such as air, and liquids, such as perspiration, to travel therethrough. See, generally, column 4, lines 35-52, of Burt.

Applicants respectfully submit that the disclosure of Burt fails to cure the deficiencies of Polycarpe and Brahm with respect to amended independent claim 22, as described hereinabove in

section 1. Specifically, Burt fails to teach, suggest, or motivate one skilled in the art to contemplate a sole comprising ***“an outsole layer defining at least one third opening extending therethrough that at least partly overlaps the plurality of second openings.”***

Applicants, therefore, submit that neither Polycarpe nor Brahm nor Burt, alone or in proper combination, provides the teaching, suggestion, or motivation for one skilled in the art to arrive at the sole as claimed in amended independent claim 22.

In addition, Applicants respectfully submit that neither Polycarpe nor Brahm nor Burt, alone or in proper combination, teaches or suggests the further limitations of at least dependent claims 25-26.

Applicants' dependent claim 25 recites a ***“climate control sock”*** and Applicants' dependent claim 26 recites a ***“climate control sock [which] comprises a two layer mesh construction.”*** In distinct contrast, neither Polycarpe nor Brahm nor Burt, alone or in proper combination, teaches or suggests such an element or construction.

With respect to Polycarpe and Brahm, as stated at lines 2-4 of paragraph 6 on page 4 of the Office action, the references are silent with respect to, and therefore fail to disclose, a ***“climate control sock.”*** With respect to Burt, Applicants respectfully submit that the reference is also silent with respect to, and therefore fails to disclose, a ***“climate control sock.”*** Burt merely mentions that a wearer's sock 4 may abut the internal layer 40. See, for example, column 4, lines 39-42, of Burt. Applicants, therefore, respectfully submit that there is no showing that a person of ordinary skill in the art would arrive at either of the limitations recited in Applicants' dependent claims 25-26, based on the teachings of the cited references.

Further, Applicants respectfully submit that the combination proposed in the Office action is without basis, because the Office action does not provide with specificity any facts or arguments to show that the nature of the problem or the knowledge of one of ordinary skill in the art would suggest the combination of Polycarpe with Brahm and Burt.

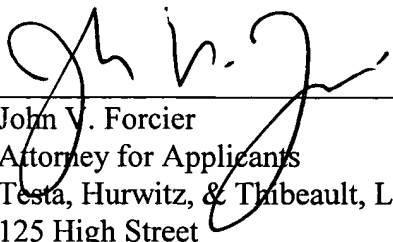
For at least these reasons, Applicants respectfully submit that dependent claims 23-27, which depend either directly or indirectly from amended independent claim 22, are independently allowable over Polycarpe in view of Brahm and Burt. Applicants respectfully request reconsideration and withdrawal of the rejection of claims 23-27 under 35 U.S.C. § 103(a) based on these references.

### **CONCLUSION**

In view of the foregoing, Applicants respectfully request reconsideration, withdrawal of all grounds of rejection, and allowance of claims 1-27 in due course. The Examiner is invited to contact Applicants' undersigned representative by telephone at the number listed below to discuss any outstanding issues.

Respectfully submitted,

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**MARKED UP VERSION OF CLAIMS SHOWING AMENDMENTS**

1. (Amended) A sole for an article of footwear, the sole comprising:
  - an insole layer defining a plurality of first openings, wherein a substantial portion of the plurality of first openings are interconnected;
  - a support layer defining a plurality of second openings that partially overlap the plurality of first openings; and
  - an outsole layer defining at least one third opening extending therethrough that at least partly overlaps the plurality of second openings.
22. (Amended) An article of footwear comprising:
  - an upper; and
  - a sole, the sole comprising:
    - an insole layer defining a plurality of first openings, wherein a substantial portion of the plurality of first openings are interconnected;
    - a support layer defining a plurality of second openings that partially overlap the plurality of first openings; and
    - an outsole layer defining at least one third opening extending therethrough that at least partly overlaps the plurality of second openings.